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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,925	12/16/2003	David A. Culp	11503	5829
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CHARLES LOUIS THOEMING 1390 WILLOW PASS ROAD, SUITE 1020 CONCORD, CA 94520				
			EXAMINER COLLINS, TIMOTHY D	
			ART UNIT 3643	PAPER NUMBER
DATE MAILED: 12/01/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,925

Applicant(s)

CULP, DAVID A.

Examiner

Timothy D. Collins

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 11-18, 31, 32 and 35-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-18, 31, 32 and 35-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/19/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 9/19/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

a. Note: with respect to the internet pages cited, some are not available and others are main sites of which it is not possible to tell what the applicant wishes to cite for the purposes of the IDS. Each specific printed page of the cite that the applicant wishes to cite should be filed if the applicant wishes to make it a part of the record.

Requirement for Information Under 37 C.F.R. 1.105

2. The prior Rule 1.105 requirement still stands, however clarification for the prior request is stated hereinafter. The applicant's previous Declaration filed 9/19/05 is noted.

b. While it is noted in the Declaration filed 9/19/05 that the applicant stated that the invention was completed on December 19,2002, the examiner maintains that this still does not explain where or how the invention was used or shown

prior to that date. As noted in the Declaration the applicant states that the invention was first publicly displayed on December 19,2002, however as seen in the CNN.com article "American teams to battle it out" of December 19,2002, the journalist states "did reveal an unusual sail last week that is flown like a kite, high above the mast." This brings up the fact that December 19, 2002 was a Thursday and therefore "last week" was at least Saturday December 14, 2002. So from this logic, the article states that at least on or before December 14,2002 the invention was "revealed" as seen in the article. Also as seen in the reference Kiteship1 the examiner has stated that the device was at least used in public by the Oracle team in November of 2002. Clarification of what took place with respect to this use is also required. It is noted that testing of the device was admitted to as being prior to December 19,2002 at least.

c. Also while it is noted that the applicant states that he presently owns all right and title to the invention. The examiner further clarifies the previous request as follows.

d. Further explanation of the above parts of this requirement is needed as to the following.

i. Where exactly was the invention tested?

(1) What body of water was it used on, and where on the body of water? Coordinates or locations with respect to bodies of land are needed.

- (2) When exactly was the device tested prior to December 19, 2002? Specific dates are needed.
- (3) Who saw the testing being performed?
- (4) What did the "testing" and "experimentation" consist of?
- (5) Was any instance of the invention sold? For example was any specific single sail sold or offered for sale?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,4(2), 4(3), 5(2), 5(3), 11-13,14(12),14(13), 31,32, and 35-44 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the device of "Kiteship1" as labeled by the examiner which is from <http://web.archive.org/web/20031101021201/www.kiteship.com/id9.html>, this piece of art discloses a traction kite (the OutLeader) which was invented at least in part by David Culp, the instant inventor and constitutes a prior use/sale by others.

a. Regarding the stated claims, Kiteship1 discloses that a kite called the Outleader which is a spinnaker replacement was disclosed and/or sold to an Americas Cup (AC) client. This according to the article happened at least before "100 or so sailing days until the Americas Cup in 2003. The AC for 2003 began

on Feb. 15, 2003 (for proof of this see at least http://en.wikipedia.org/wiki/America's_Cup, called AC1 by the examiner). Also because of these details it can be seen that 100 days before 2/15/03 would be approximately the beginning of November of 2002. November 2002 being more than one year prior to the present application for Patent (12/16/03). For proof of the structure of the OutLeader kite see also the photos of the www.kiteship.com web pages such as <http://www.kiteship.com/id5.html>. See also the 37 CFR 1.105 Requirement for Information. Also with respect to the limitations that the stresses in the wing are tensile and that they are transferred via the lines to the watercraft or transportation means, this is inherent because the lines are flexible (similar to a rope) and due to physics the only forces that can be transferred via a rope like structure are tensile. With respect to the limitation of sail handling means, inherently by way of calling the OutLeader a sail there must be "sail handling means", these means may be the eyes, pulleys, winches or even a bolt that the line is tied to. All of the previously listed are "sail handling means" because they all allow for the handling of the sail even if they are static. In other words even if the lines are merely tied to the ship or vessel these points are the means of the limitations.

4. Claims 1-2, 4(2), 5(2), 11-13,14(12),14(13), 16(14(12)) and 16(14(13)), 17(16(14(12))), 17(16(14(13))), 18(17(16(14(13))))), 18(17(16(14(12))))), 31,32 and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4296704 to Bridge (hereinafter called 704).

a. Re claims 1, 31 and 32, 704 discloses a transportation means (watercraft) 18, with single layer, stable, powerful aerodynamic means capable of flying without surface discontinuity, bridles or rigid structure and with a centerline wingtips and tail corner. All seen at least in figure 1. the statement "capable of flying without surface discontinuity, bridles or rigid structure and with a centerline wingtips and tail corner" is taken as meaning that the kite must have sections without discontinuity (because the applicant's for example is not only one piece, but at least 2 stitched together which gives a discontinuity) as seen at 10, and it can also be seen that 704 discloses that the craft is capable of flight with no bridles and no rigid structure at least in column 3 wherein it is stated in lines 33-41 that lines similar to bridles are optional and also a non-rigid but light plastic is also optional. Also 704 discloses attachment means linking the aerodynamic means to transportation means. The attachment means being 30,26 and 28 with 20 and 22 being where they meet the vessel 18.

b. Re claim 2, 704 discloses a lightweight 3D wing 10, with a plurality of gores of predetermined geometries as seen at least in figure 1 at numbers 32 and 42. Also as seen in figure 6 the gores may be numbers 242 and 232B. As can be seen in figure 1 and 6, the fabric is curved toward the front and therefore it is considered a "self supporting rolled over leading edge". Also as seen in figure 6 and 1, there is a trailing edge between the lines 228 and 226, and lines 26 and 28 in figure 1, and also a nose near line 230 and 30. There is disclosed a windward surface being the inside and outside surface 242 for example that is

outside the craft of figure 6 and number 32 approximately pointing to the outside in figure 1. Also with respect to the limitations that the stresses in the wing are tensile and that they are transferred via the lines to the watercraft or transportation means, this is inherent because the lines are flexible (similar to a rope) and due to physics the only forces that can be transferred via a rope like structure are tensile. 704 discloses at least in figures 1 and 6 that the convexity of the trailing edge increases at least slightly, this is because as the wind blows on the device it will flex and become more and less convex at certain points.

c. Re 4(2) and 5(2), 704 discloses that the lines have 2 ends of which one is affixed to the transportation means and one to the aerodynamic means. Also 704 discloses that there are 3 of these flexible lines that are affixed to specific control points 20 and 22 on the vessel and to the aerodynamic means at unique points on the periphery of the wing.

d. Re claim 11, 704 discloses a watercraft with sail handling means 20 and 22, with single layer, stable, powerful lightweight 3D wing with a centerline wingtips and tail corner. 704 also discloses 3 flying lines (26,28, and 30) of predetermined adjustable length. These lines are "adjustable" inherently at least because they may be tied into knots to lessen their length. The term "adjustable" is functional language and therefore the reference must be capable of being adjusted. With respect to the limitation of sail handling means, inherently by way of calling the device a spinnaker or sail there must be "sail handling means" as seen in 20 and 22, these means may be eyes, pulleys, winches or even a bolt

that the line is tied to. All of the previously listed are "sail handling means" because they all allow for the handling of the sail even if they are static (because they hold the sail). In other words even if the lines are merely tied to the ship or vessel these points are the means of the limitations. See also rejection of claims 1,2, 31 and 32 above.

e. Re claim 12, see claims 1,11 and 2 above.

f. Re claim 13, 704 discloses a molded single continuous sheet which defines a large diameter self-supporting roll-over leading edge with trailing edge, nose, inner and outer surfaces. At least as seen in the rejection of claims 1 and 2. Also it is noted that at least for the reason that the applicant's invention is a single continuous sheet, the reference 704 discloses such limitation. It is noted that the applicant's invention is stated as having a plurality of pieces that are sewn together. Also with respect to the limitations that the stresses in the wing are tensile and that they are transferred via the lines to the watercraft or transportation means, this is inherent because the lines are flexible (similar to a rope) and due to physics the only forces that can be transferred via a rope like structure are tensile. 704 discloses at least in figures 1 and 6 that the convexity of the trailing edge increases at least slightly, this is because as the wind blows on the device it will flex and become more and less convex at certain points.

g. Re claims 14(12) and 14(13), 704 discloses that the 3 lines define 3 axes in relation to the wing and watercraft because it is supported or controlled by these 3 lines in all 3 axes. The wherein clause is also taken as functional

language and therefore the present 704 reference must be capable of performing the tasks of the claim, which for example it is capable of being controlled in the manner of the claim if it's lines are independently manipulated in length.

Because these lines are "adjustable" inherently at least because they may be tied into knots to lessen their length.

h. Re 16(14(12)) and 16(14(13)), 704 discloses of at least one variously shaped and sized enclosure of lighter than air gas at least in figures 1-6 and also in column 1 at lines 35-65. These gas bags are taught to allow the device to hold its shape without a breeze and also so that the spinnaker replacement kite floats high above the boat, as taught at least in column 2 at lines 9-17. Also the gas bags 32 can be seen in figure 3.

i. Re 17(16(14(12))) and 17(16(14(13))), 704 discloses that the enclosures of gas are torpedo shaped with a lightweight gas impermeable material attached to the wings centerline and that the wing is rendered negatively buoyant in air as seen at least in figure 6 at number 232A and also in column 2 at lines 9-22.

j. Re 18(17(16(14(13)))) and 18(17(16(14(12))))), 704 discloses that the wing comprises two conjoined vaults or lobes of material with a projecting angle between them running completely or partly along the centerline as seen at least in figure 1 and 5.

k. Re claims 35(4(2)),35(5(2)) and 36(4(2)),36(5(2)), 704 discloses a watercraft as seen in figure 1 at number 18.

l. Re claims 37(35(4(2))), 37(35(5(2))), and 38(35(4(2))), 38(35(5(2))), 704 discloses a device which is capable of performing the functions of the present claims, however since the applicant is claiming an apparatus, and not a method, the claims are readable on the device which is capable of performing the controlling of the wing. It is suggested that if applicant wishes to claim these functions to use a method claim.

m. Re claims 39(37(35(4(2))))), 39(37(35(5(2))))), and 40(38(35(4(2))))), 40(38(35(5(2))))), 704 discloses at least one gas containing enclosure which may be shaped in various ways as seen in the figures.

n. Re claims 41(39(37(35(4(2))))), 41(39(37(35(5(2))))), and 42(40(38(35(4(2))))), 42(40(38(35(5(2))))), see rejections of limitations of 39(37(35(4(2))))), 39(37(35(5(2))))), and 40(38(35(4(2))))), 40(38(35(5(2)))) and also see rejections of claims 17(16(14(12))) and 17(16(14(13))) above.

o. Re claims 43(41(39(37(35(4(2))))), 43(41(39(37(35(5(2))))), and 44(42(40(38(35(4(2))))), 44(42(40(38(35(5(2))))), see rejections of claims 41(39(37(35(4(2))))), 41(39(37(35(5(2))))), and 42(40(38(35(4(2))))), 42(40(38(35(5(2)))) and also rejections of claims 18(17(16(14(13)))) and 18(17(16(14(12)))) above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the OutLeader kite of Kiteship1 as applied to claims 1-3,4(2), 4(3), 5(2), 5(3), 11-13,14(12), 14(13), 31,32, and 35-44 above. Kiteship1 and the OutLeader kite discloses that the wing is 3D, however does not state that the gores are secured by adhesive at the joints and sewn using overlapping seams and zigzag stitching. However the examiner takes official notice that these methods of securing are old and well known in the art of parachutes, sails and kites for the advantage that this is a strong wind tight and reliable seam. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of adhesive at the joints and sewing using overlapping seams and zigzag stitching so as to produce a strong wind tight and reliable joint so as to make the kite bigger than one single piece of fabric and also to allow for custom shapes.

7. Claims 16(14(12)), 16(14(13)), 17(16(14(12))), 17(16(14(13))), 18(17(16(14(13))))), 18(17(16(14(12))))), are rejected under 35 U.S.C. 103(a) as being unpatentable over the OutLeader kite of Kiteship1 as applied to claims 1-3,4(2), 4(3), 5(2), 5(3), 11-13,14(12), 14(13), 31,32, and 35-44 above, and further in view of USPN 4296704 to Bridge (hereinafter called 704).

p. Re 16(14(12)) and 16(14(13)), Kiteship1 does not disclose that the 3D wing has at least one variously shaped and sized enclosure of lighter than air gas, however 704 does teach of this. 704 teaches of at least one variously shaped and sized enclosure of lighter than air gas at least in figures 1-6 and also in column 1 at lines 35-65. These gas bags are taught to allow the device to hold its shape without a breeze and also so that the spinnaker replacement kite floats high above the boat, as taught at least in column 2 at lines 9-17. Also the gas bags 32 can be seen in figure 3. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of 704 into the device of Kiteship1 so as to allow for the device to hold its shape without a breeze and also so that the spinnaker replacement kite floats high above the boat.

q. Re 17(16(14(12))) and 17(16(14(13))), Kiteship1 does not disclose that the enclosures of gas are torpedo shaped with a lightweight gas impermeable material attached to the centerline. However 704 teaches that the enclosures of gas are torpedo shaped with a lightweight gas impermeable material attached to the wings centerline and that the wing is rendered negatively buoyant in air as seen at least in figure 6 at number 232A and also in column 2 at lines 9-22.

r. Re 18(17(16(14(13)))) and 18(17(16(14(12)))), Kiteship1 and the OutLeader kite of Kiteship1 disclose that the wing comprises two conjoined vaults or lobes of material with a projecting angle between them running completely or partly along the centerline.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over 704 as seen above in claims 1-2, 4(2), 5(2), 11-13, 14(12), 14(13), 16(14(12)) and 16(14(13)), 17(16(14(12))), 17(16(14(13))), 18(17(16(14(13)))), 18(17(16(14(12)))), 31 and 32.

s. Re claim 15, 704 discloses that the wing is 3D, however does not state that the gores are secured by adhesive at the joints and sewn using overlapping seams and zigzag stitching. However the examiner takes official notice that these methods of securing are old and well known in the art of parachutes, sails and kites for the advantage that this is a strong wind tight and reliable seam. Therefore it would have been obvious to one of ordinary skill in the art to have applied the teachings of adhesive at the joints and sewing using overlapping seams and zigzag stitching so as to produce a strong wind tight and reliable joint so as to make the kite bigger than one single piece of fabric and also to allow for custom shapes as seen in the reference at least in the figures.

Response to Arguments

4. Applicant's arguments filed 9/19/05 have been fully considered but they are not persuasive.

e. With respect to applicant's argument that the Kiteship1 reference is overcome by the declaration. The examiner maintains that the declaration is not persuasive and needs to be further clarified as seen above.

f. With respect to the applicant's argument that the device of 704 relies on other parts to hold shape, and needs gas bags. The examiner maintains that

these arguments are more specific than that which is claimed. Also the examiner notes that the applicant has used the “comprising” language in the claims, therefore the device claimed may contain more than just the elements listed.

g. With respect to the applicant’s argument that the device “flies” freely. The examiner maintains that the device of 704 and Kiteship1 both “fly” freely. The examiner maintains that these arguments are more specific than that which is claimed.

h. With respect to the applicant’s argument that the device of 704 is a developable surface. The examiner maintains that the device meets the limitations of the claims.

i. With respect to the applicant’s argument that the device does not flex or has no curvature and even if it does it does it by “happenstance”. The examiner maintains that if the device does it at all or even just a little, then it meets the claim limitations. Also because of the above, it is noted that the applicant states that the current invention is carefully controlled and designed to do things. These are also merely functional arguments and also more specific than that which is claimed.

j. With respect to the applicant’s argument that the device has adjustable lines, the examiner maintains that this is merely functional language and the 704 reference does disclose that the lines may be adjusted at least inherently because they are thin lines which are capable of being adjusted at least through tying knots as is well known in the art. The applicant has not claimed that the

lines ARE adjusted, just that it is possible to adjust them, which is known in kite control fields.

k. With respect to the applicant's argument that the device of 704 does not teach of torpedo shaped gas bags. The examiner maintains that the gas bags of 704 are roughly torpedo shaped, in that they are rounded and sleek.

l. With respect to the applicant's argument that the device of 704 does not disclose 2 vaults or lobes. The examiner maintains that the seams of the devices as seen in figures 2-6 are what give the device the vaults or lobes. Also it appears that the argument of how the device of the present invention is used is more specific than that which is claimed. The control of the device is not claimed and how this interacts with the vaults or lobes and the air flow is not claimed.

m. With respect to the applicant's argument that the device of the present invention was first used in public anywhere on the 19th of December 2002. The examiner maintains that any use of the above device must be disclosed as to where it took place such that the examiner may make the determination as to what was "public" and what was not. The questions of the article in cnn.com and the other articles raise these questions and therefore more information is needed. See the enclosed Rule 1.105 requirement above.

n. It is suggested that the applicant positively claim and recite more detail of the invention in the claims. Also note that recitation of use and function as well as design in the arguments are not limitations as seen in the claims.

Conclusion

9. This office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office Action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office Action.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D. Collins whose telephone number is 571-272-6886. The examiner can normally be reached on M-F, 7:00-3:00, with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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11/28/05